

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:	Jang
Application No.:	09/934,310
Filed:	August 21, 2001
For:	Intravascular Stent
Examiner:	Paul Prebilic
Group Art Unit:	3774

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Docket No.: S63.2-8429-US04

APPEAL BRIEF

This is an Appeal Brief for the above-identified application. A Notice of Appeal was filed in this case on May 5, 2008.

The Commissioner is authorized to charge Deposit Account No. 22-0350 for any other fees which may be due with this Appeal.

(B) Table of Contents

Real Party of Interest	Page 3
Related Appeals and Interference	Page 4
Status of Claims	Page 5
Status of Amendments	Page 6
Summary of Claimed Subject Matter	Page 7
Grounds of Rejection to be Reviewed on Appeal	Page 9
Argument	Page 10
Claim Appendix	Page 16
Evidence Appendix	Page 17
Related Proceedings Appendix	Page 18

(C) Real Party in Interest

The Application is assigned to Boston Scientific Scimed, Inc., formerly known as Scimed Life Systems, Inc., One SciMed Place, Maple Grove, Minnesota 55311-1566, a Minnesota corporation and a subsidiary of Boston Scientific Corporation, One Boston Scientific Place, Natick, Massachusetts 01760-1537, a Delaware Corporation.

(D) Related Appeals and Interferences

At present, related application No. 10/206,432 is currently under appeal. Prior appeals for related applications were filed for application Nos. 09/925,562, 10/080,289, 10/123,883 and 10/374,774.

Applicant submits herewith notice to the USPTO that the present Application, and/or related Applications and patents, is currently the subject of, or relevant to litigation. More specifically, litigation is underway in the United States District Court for the Central District of California (Eastern Division-Riverside) involving G. David Jang versus Boston Scientific Corporation and Scimed Life Systems, Inc. (Civil Action Number: 05-00426), which is now under appeal to the United States Court of Appeals for the Federal Circuit. Litigation is also underway in the United States District Court for the District of Delaware between Boston Scientific Scimed Inc., and Boston Scientific Corporation versus Cordis Corporation and Johnson and Johnson Inc. (Civil Action Number: 03-283-SLR). Litigation which was underway in the United States District Court for the District of Delaware between Boston Scientific Scimed Inc., and Boston Scientific Corporation versus Conor Medsystems Inc. (Civil Action Number: 05-768-SLR) concluded with a stipulation of dismissal without prejudice on June 5, 2007.

(E) Status of Claims

Claims 50-55 have been rejected and are the subject of this appeal.

Claims 1-49 have been cancelled.

(F) Status of Amendments

No Amendments were filed after the Final Office Action dated February 4, 2008.

(G) Summary of Claimed Subject Matter

A summary of representative claims and a non-limiting listing of locations where support may be found [bracketed citations] is provided as follows:

Independent claim 50 recites a seamless stent having a first end, an opposing second end, and a longitudinal length [pg. 8, lines 31 to pg. 9, line 1 and pg. 9, lines 3-4]. The stent has a diameter throughout its length, and comprises a plurality of annular elements, each annular element having a compressed state and an expanded state [pg. 9, lines 5-8 of the application as filed; also see the Amendment submitted August 21, 2007; pg. 13, lines 7-8]. At least a portion of the stent has a tapered portion in the expanded state with the diameter of the stent increasing along the tapered portion and the length of the struts increasing from annular element to annular element along the tapered portion [pg. 15, lines 4-32 of the application as filed; also see the Amendment submitted August 21, 2007]. The first and second ends have different degrees of flexibility and different diameters [pg. 13, lines 16-19; pg. 16, lines 15-17; pg. 17, lines 2-6 of the application as filed; also see the Amendment submitted August 21, 2007].

Independent claim 52 recites a stent cut from a tube of balloon expandable material [pg. 9, lines 11-13 and pg. 25, lines 17-23]. The stent has a pattern of openings formed by removing material from the tube [pg. 10, lines 12-13 of the application as filed; also see the Amendment submitted August 21, 2007; and pg. 12, line 29 of the application as filed; also see the Amendment submitted August 21, 2007]. The stent has a first end, an opposing second end, and a longitudinal length [pg. 8, lines 31 to pg. 9, line 1]. The stent has a diameter throughout its length [pg. 9, lines 11-17]. The stent is expandable [pg. 9, lines 11-15]. The stent comprises a plurality of annular elements [pg. 9, lines 5-8 of the application as filed; also see the Amendment submitted August 21, 2007]. The stent when expanded has a tapered portion with the diameter of the stent increasing along the tapered portion and the length of the struts increasing from annular element to annular element along the tapered portion [pg. 15, lines 4-32 of the application as filed; also see the Amendment submitted August 21, 2007]. The first and second ends have different degrees of flexibility and different diameters [pg. 13, lines 16-19; pg. 16,

lines 15-17; pg. 17, lines 2-6 of the application as filed; also see the Amendment submitted August 21, 2007].

Independent claim 54 recites a seamless stent having a diameter and a taper along a majority of a longitudinal length of the stent, the diameter of the stent decreasing along the taper [pg. 9, lines 3-4; pg. 10, lines 14-15; pg. 15, lines 4-32 of the application as filed; also see the Amendment submitted August 21, 2007]. The stent comprises a plurality of annular elements of decreasing longitudinal length along the taper [pg. 9, lines 5-8 of the application as filed; also see the Amendment submitted August 21, 2007; pg. 15, lines 4-32 of the application as filed; also see the Amendment submitted August 21, 2007]. One end of the stent has a larger diameter than the other end of the stent [pg. 15, lines 4-32 of the application as filed; also see the Amendment submitted August 21, 2007].

(H) Grounds of Rejection to be Reviewed on Appeal

1. Whether the Examiner erred in rejecting claims 50-53 under 35 U.S.C. §103(a) as being unpatentable over U.S. 5,421,955 to Lau et al. in view of U.S. 5,843,117 to Alt et al. or U.S. 6,027,526 to Limon et al.

2. Whether the Examiner erred in rejecting claims 54-55 under 35 U.S.C. §103(a) as being unpatentable over U.S. 5,421,955 to Lau et al.

(I) Argument

1. The Examiner erred in rejecting claims 50-53 under 35 U.S.C. §103(a) as being unpatentable over U.S. 5,421,955 to Lau et al. in view of U.S. 5,843,117 to Alt et al. or U.S. 6,027,955 to Limon et al.

In the Final Office Action, claims 50-53 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lau in view of Alt or Limon.

Independent claims 50 and 52 recite in part, “the length of the struts increasing from annular element to annular element along the tapered portion.” The Office Action’s rejection of claims 50-53 depends on a misreading of what Lau (U.S. 5421955) discloses. The Office Action incorrectly states that a sentence in Lau describes a single stent having annular elements of different amplitudes within the stent (Lau, col. 5, line 66 to col. 6, line 2)¹. The Examiner combines this with the teaching in Lau of implanting a stent in a tapered vessel via the use of a balloon which is tapered when inflated (Lau, col. 4, lines 48-52). The sentence in question, the final sentence of the paragraph at the bottom of col. 5, as well as the remainder of the paragraph (Lau, col. 5, line 61 – col. 6, line 2), is reproduced below.

The properties of the stent 10 may also be varied by alteration of the undulating pattern of the cylindrical elements 13. FIG. 11 illustrates an alternative stent structure in which the cylindrical elements are in serpentine patterns but out of phase with adjacent cylindrical elements. The particular pattern and how many undulations per unit of length around the circumference of the cylindrical element 12, or the amplitude of the

undulations, are chosen to fill particular mechanical requirements for the stent such as radial stiffness.

¹ “The particular pattern and how many undulations per unit of length around the circumference of the cylindrical element, 12 of the amplitude of the undulations, are chosen to fill particular mechanical requirements for the stent such as radial stiffness”

Col. 5, line 66 to col. 6 line 2 of Lau does not refer to
a stent having annular elements of different amplitudes with the stent

The sentence at issue is actually stating that the amplitude of the undulations within a stent may be varied from stent to stent. Within a given stent, however, each cylindrical element is identical. This is evident because the sentence uses the term “amplitude” not “amplitudes,” meaning that a given stent will have a particular chosen amplitude and not multiple amplitudes. The sentence would have to refer to "amplitudes" in the plural to be consistent with the Examiner's assertion.

This position is also consistent with the wording of the remainder of the paragraph, reproduced above. The first sentence of the paragraph, states, for example, "The properties of the stent 10 may also be varied by alteration of the undulating pattern of the cylindrical elements." Here, too, the specification refers to varying the undulating pattern in the singular, not in the plural. The use of the term in the singular means that a given stent has one pattern throughout the stent and it is this pattern which is being varied from stent to stent.

Furthermore the sentence concludes by stating that the amplitude of the element is selected to fill the particular mechanical requirements of the stent. (Lau, col. 6, lines 1-2). The term “mechanical requirement” is a term of art in Lau which refers to the stent as a whole and not portions of it. Lau defines one mechanical requirement as being the strength to hold open the body lumen the stent is expanded into (Lau, col. 1, lines 48-50). Therefore, radial stiffness is an example of a mechanical requirement. (Lau, col. 6, lines 1-2).

Because the sentence at issue says that the single amplitude is selected to address mechanical requirements and because mechanical requirements refer to attributes of the stent as a whole, the sentence at issue is saying that a single amplitude is selected for the stent as a whole. As a result, there is no disclosure in Lau of a stent in which different annular elements within the stent differ in amplitude.

Regardless of whether col. 5, line 66 to col. 6, line 2 describes more than one strut length in a stent, Lau still does not describe every limitation in the claims

Regardless of whether the col.5, line 66 to col. 6, line 2 describes the use of several different amplitude bands within a stent, Lau still does not describe every limitation in the claims.

For example, the claims state that the strut lengths *increase* from annular element to annular element *along the tapered portion*. Nowhere in Lau is there any description of where along the stent the supposed different amplitudes would be located.

While Lau describes using a tapered balloon to shape a tapered stent (Lau, col. 4, lines 49-52), the combination of a tapered balloon with the alleged elements having different amplitudes does not constitute a disclosure of "strut lengths increasing along the tapered portion". Without any disclosure as to where hypothetical different amplitudes bands are located, they may be located off of the taper or only one may be on the taper. In addition the claim language of 'increase' describes a sequence of increasing strut lengths. Nothing in Lau describes such a sequence and the hypothetical different amplitudes could be ordered out of an increasing sequence.

The addition of Alt, which is asserted to teach that it was known to vary the radial thickness and stiffness with struts of substantially the same circumferential width, does nothing to address the failure of Lau to teach or suggest all the elements of the claims. Therefore the combination of Lau and Alt does not render the instant claims obvious.

The addition of Limon, which is asserted to teach that it was known to vary the radial thickness and stiffness with struts of substantially the same circumferential width, does nothing to address the failure of Lau to teach or suggest all the element of the claims. Therefore the combination of Lau and Limon does not render the instant claims obvious.

For at least these reasons, Applicant requests reversal of the rejection.

2. The Examiner erred in rejecting claims 54-55 under 35 U.S.C. §103(a) as being unpatentable over U.S. 5,421,955 to Lau et al.

In the Final Office Action, claims 54-55 were rejected under Lau alone. Independent claim 54, from which claim 55 depends, recites in part, “the stent comprising a plurality of annular elements of decreasing longitudinal length along the taper.” The Office Action’s rejection of claims 54-55 depends on the above discussed misreading of what Lau discloses. As discussed above, Lau does not disclose a stent in which different annular elements within the stent differ in amplitude. Additionally, the claims state that the strut lengths increase from annular element to annular element along the tapered portion. Nowhere in Lau is there any description of where along the stent the supposed different amplitudes would be located.

While Lau describes using a tapered balloon to shape a tapered stent (Lau, col. 4, lines 49-52), the combination of a tapered balloon with the alleged elements having different amplitudes does not constitute a disclosure of “strut lengths increasing along the tapered portion.” Without any disclosure as to where hypothetical different amplitude bands are located, they may be located off of the taper or only one may be on the taper. In addition, the claim language of ‘increase’ describes a sequence of increasing strut lengths. Nothing in Lau describes such a sequence and the hypothetical different amplitudes could be ordered out of an increasing sequence.

For at least these reasons, Applicant requests reversal of the rejection.

CONCLUSION

Instant claims 50-55 are patentably distinct over Lau in view of Alt or Limon or over Lau alone. Consequently reversal of the rejections is respectfully requested.

Respectfully submitted,

VIDAS, ARRETT & STEINKRAUS, P.A.

Date: July 15, 2008

By: / Jennifer L. Buss /
Jennifer L. Buss
Attorney of Record
Registration No. 57321

Suite 400
6640 Shady Oak Rd.
Eden Prairie, MN 55344
Phone: (952) 563-3000
Facsimile: (952) 563-3001

F:\WPWork\JLB\8429US04_appealbrief_20080623.doc

(J) Claims Appendix

50. A seamless stent having a first end, an opposing second end, and a longitudinal length, the stent having a diameter throughout its length, and comprising:

a plurality of annular elements, each annular element having a compressed state and an expanded state; and

at least a portion of the stent having a tapered portion in the expanded state with the diameter of the stent increasing along the tapered portion and the length of the struts increasing from annular element to annular element along the tapered portion;

wherein the first and second ends have different degrees of flexibility and different diameters.

51. The seamless stent of claim 50 wherein the tapered portion extends over the majority of the length of the stent.

52. A stent cut from a tube of balloon expandable material, the stent having a pattern of openings formed by removing material from the tube, the stent having a first end, an opposing second end, and a longitudinal length, the stent having a diameter throughout its length, the stent being expandable, the stent comprising:

a plurality of annular elements;

the stent when expanded having a tapered portion with the diameter of the stent increasing along the tapered portion and the length of the struts increasing from annular element to annular element along the tapered portion;

wherein the first and second ends have different degrees of flexibility and different diameters.

53. The stent of claim 52 wherein the tapered portion extends over the majority of the length of the stent.

54. A seamless stent having a diameter and a taper along a majority of a longitudinal length of the stent, the diameter of the stent decreasing along the taper, the stent comprising a plurality of annular elements of decreasing longitudinal length along the taper, one end of the stent having a larger diameter than the other end of the stent.

55. The stent of claim 54 where the stent is made of a balloon expandable material.

Application No: 09/934,310
Filed: August 21, 2001

Brief on Appeal
Page 16

(K) Evidence Appendix - None

(L) **Related Proceedings Appendix**

Redacted copies of decisions rendered by the courts in Cordis v. Boston Scientific (03-027-SLR), Jang v. Boston Scientific (05-426-VAP), and Boston Scientific Corporation v. Conor Medsystems Inc. (05-768-SLR)

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

CORDIS CORPORATION,)	
)	
Plaintiff,)	
)	
v.)	Civ No 03-027-SLR
)	
BOSTON SCIENTIFIC CORPORATION)		
and SCIMED LIFE SYSTEMS, INC.,)		
)	
Defendants)	

MEMORANDUM ORDER

At Wilmington this 3rd day of June, 2005, having heard oral argument and having reviewed the papers submitted in connection with the parties' proposed claim construction;

IT IS ORDERED that the disputed claim language in U.S. Patent Nos. 5,895,406 ("the '406 patent"), 5,922,021 ("the '021 patent") and 4,739,762 ("the '762 patent"), as identified by the above referenced parties, shall be construed consistent with the tenets of claim construction set forth by the United States Court of Appeals for the Federal Circuit, as follows:

C. Claim 23 of the '021 patent.

1. "Strut."

Consistent with the claim language and its ordinary meaning,¹³ this court construes "strut" to mean "a structural member designed to withstand force "

2. "Expansion strut pair corners" and "corners" of "expansion strut pairs."

Consistent with the claim language and its ordinary meaning¹⁴ and the specification,¹⁵ this court construes "corners" to mean "a place where two surfaces meet to form an angle "

3. "A first connecting strut column formed of a plurality of first connecting struts."

Consistent with the claim language and its ordinary meaning¹⁶ and the specification¹⁷ this court construes this

¹³D I 230, Ex 4 (defining "strut" as "[a] structural member which is designed to take compression")

Cordis argues that the strut is designed to withstand pressure along its length. The specification, however, indicates that the stent is designed to withstand radial forces; limiting "strut" to structures that withstand pressure along their length is too narrow. ('021 patent, col. 3, ll. 24, 26, 46-47)

¹⁴D I. 230, Ex 5 at 452 (defining "corner" as "the place at which two converging lines or surfaces meet" and "the space between two converging lines or surfaces near their intersection; angle"); D I 233, Ex 11 at 507 (defining "corner" as "the point or place where converging lines, edges or sides meet: ANGLE ...").

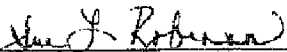
¹⁵'021 patent, col. 11, ll. 66-67 - col. 12, ll. 11.

¹⁶BSC argues that this limitation should be construed simply as a "column . . . formed of connecting struts." This construction, however, is not consistent with the other claims (see, e.g., '021 patent, col. 18, ll. 24-31; '021 patent, col. 22, ll. 42-52) (referring to "first connecting strut" as connecting the first expansion strut pair and second expansion

limitation to mean "a column formed of at least two first connecting struts."

4. "Wherein the first expansion strut of the first expansion strut pair in the first expansion column has a longitudinal axis offset from a longitudinal axis of the first expansion strut of the second expansion strut pair in the second expansion column."

Consistent with the claim language and its ordinary meaning and the specification¹⁸ and prosecution history,¹⁹ this court construes this limitation as meaning that "the first expansion strut in the first column does not share a longitudinal axis with the second expansion strut in the second column "

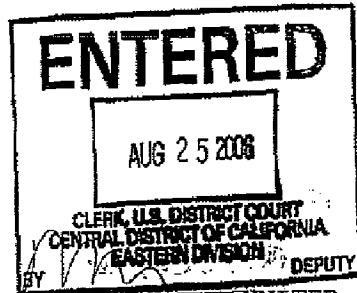

United States District Judge

strut pair). Without a clear indication in the specification that "first connecting struts" should be given a different meaning in different claims, it should be construed consistently throughout. See also, Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Inter'l, Inc., 389 F.3d 1370, 1377 (Fed Cir 2004) (citation omitted). Thus, this court declines to adopt BSC's asserted construction of this limitation.

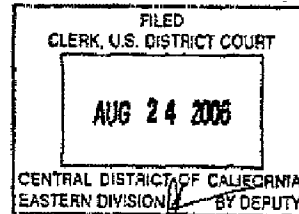
¹⁷'021 patent, col 6, ll 46-52 (defining the "first connecting strut" as the first strut in the column and "second connecting strut" as the second strut in the column).

¹⁸'021 patent, col. 6, ll 53-55 (defining "offset" as not collinear).

¹⁹D I 233, Ex 25 at JFH 192, 196, 209, 217.



Priority ☒
Send ☒
Enter ☒
Closed ☒
JS-5/JS-6 ☒
JS-2/JS 3 ☒
Scan Only ☒



THIS CONSTITUTES NOTICE OF ENTRY
AS REQUIRED BY FRCP, RULE 77(d).

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

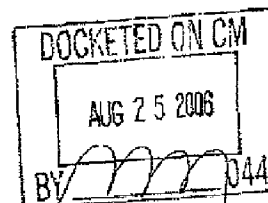
11 G. DAVID JANG, M.D.,
12 Plaintiff,

13 v

14 BOSTON SCIENTIFIC
15 CORPORATION, a Delaware
16 corporation; SCIMED LIFE
SYSTEMS, INC., a
Minnesota corporation,
17 Defendants.

Case No. EDCV 05-426-
VAP (CTx)

CLAIM CONSTRUCTION ORDER



18 The Court conducted a hearing on May 30, 2006, on the
19 parties' proposed constructions of certain terms in Claim
20 1 in the two patents at issue here,¹ pursuant to Markman
21 v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir.
22 1995) (en banc) *aff'd*, 517 U.S. 370 (1996) Having
23 considered the written submissions from both parties, as
24

25
26 ¹These are U.S. Patent Nos. 5,922,021, entitled
27 "Intravascular Stent" ("the '021 patent") and
28 5,954,743, entitled "Intravascular Stent" ("the '743
patent"), attached to the Declaration of June T. Tai as
Exhibits 1 and 2, respectively, and to the Declaration of
John Nilsson as Exhibits A and B, respectively, referred
to collectively in this Order as "the Jang patents."

(99)

1 well as the arguments presented at the hearing, the Court
2 now issues its claim construction order ²

23 ²The parties agree that the disputed terms have the
24 same meaning in both the '021 and '743 patents. See Dr.
25 Jang's Opening Claim Construction Brief ("Pl.'s Br.") at
26 2; Defendants Boston Scientific Corp.'s and Scimed,
Inc.'s Opening Claim Construction Brief ("Def'ts' Br." at
1 fn.3.

2

9 II. CLAIM CONSTRUCTION

10 1. "Expansion Column"

11 The parties agree that the expansion columns consist
12 of expansion pairs; they dispute, however, whether or not
13 the expansion columns can contain structural members, or
14 struts, other than expansion strut pairs, and whether the
15 columns should be defined as "tubular." Thus, Plaintiffs
16 ask the Court to adopt the following construction of this
17 term: "a vertical extension of space around the
18 circumference of the stent formed by two or more
19 expansion strut pairs " [Pl.'s Br. at 18.] The defense
20 seeks an order construing the term as follows: "a
21 tubular structure formed solely by a plurality of
22 expansion strut pairs arranged in a column along the
23 circumference of the stent." [Def'ts' Br. at 24.]⁵

24
25 ⁵The Court's resolution of the parties' dispute over
26 the construction of this term also determines its
27 construction of the following terms: (1) "expansion
28 strut," for which Plaintiff seeks the following
construction: "A strut that extends at least in part in
the direction of the longitudinal axis of the unexpanded

(continued...)

1 The language of the patent, including the Summary of
2 the Invention as well as the specifications, supports
3 Defendants' proposed construction.

4
5 The Summary of the Invention, for example, mentions
6 only expansion strut pairs - and no other structural
7 member - in the description of the expansion columns.
8 [See '021 Patent, Col. 3, lines 47-67, Col. 4, lines 1-
9 8.] As the Federal Circuit explained in C.R. Bard, Inc.
10 v. U.S. Surgical Corp., 388 F.3d 858, 864 (Fed. Cir.
11 2004), "[a]lthough a statement's location is not
12 'determinative,' the location can signal the likelihood
13 that the statement will support a limiting definition of
14 a claim term. Statements that describe the invention as
15 a whole, rather than statements that describe only
16 preferred embodiments, are more likely to support a
17 limiting definition of a claim term." (Citations
18 omitted.) And, as Defendants point out, all of the
19 references to "expansion columns" in the patents mention
20 only expansion strut pairs. See '743 patent, col. 5,
21 lines 14-15, 29-38; col. 8, lines 8-21.

22 // // //

23

24

25 ⁵(...continued)
26 stent." [Pl.'s Br. at 16] and Defendants argue should be
27 construed as follows: "A strut in an expansion column"
28 [Def'ts' Br. at 35]; and (2) "expansion strut pair." For
both of these terms, the Court adopts the defense's
proposed construction

1 Plaintiff also argues that Claim 1 of both patents
2 recites that a plurality of expansion strut pairs form an
3 expansion column, as opposed to reciting that the column
4 is formed solely by a plurality of expansion strut pairs.
5 [Pl.'s Br. at 18.] Plaintiff rests this argument, in
6 part, on what he characterizes as the "comprising" nature
7 of the claim; he contends that a comprising claim is
8 "open" and additional elements may be added beyond those
9 that are specifically recited in the claim. [Pl.'s
10 Rebuttal Br. at 6.] Furthermore, he argues, one cannot
11 avoid infringement by adding a feature to a patented
12 invention, citing Lighting World, Inc. v. Birchwood
13 Lighting, Inc., 382 F.3d 1354, 1365 (Fed. Cir. 2004).
14 According to Dr. Jang, his patents do not disclaim
15 inclusion of additional elements in expansion columns,
16 and in fact teach that other elements may be added, such
17 as radiopaque markers. [Plaintiff's Supplemental Claim
18 Construction Brief ("Pl.'s Supp'l Br.") 7.]

19
20 "When a patent claim uses the word 'comprising' as
21 its transitional phrase, the use of 'comprising' creates
22 a presumption that the body of the claim is open. In the
23 parlance of patent law, the transition 'comprising'
24 creates a presumption that the recited elements are only
25 a part of the device, that the claim does not exclude
26 additional, unrecited elements." Crystal Semiconductor
27 Corp. v. TriTech Microelect. Int'l, Inc., 246 F.3d 1336

28

1 (Fed. Cir. 2001) Plaintiff relies too heavily on this
2 concept, however; the Federal Circuit case law
3 reiterates that mere presence of the transitional word
4 "comprising" in the patent "does not free the claim from
5 its own limitations." Kustom Signals, Inc. v. Applied
6 Concepts, Inc., 264 F.3d 1326, 1332 (Fed. Cir. 2001).

7
8 Only "expansion strut pairs"⁶ are described in the
9 claim language; as discussed above, nowhere does the
10 patent describe any other structural member contained in
11 the expansion columns ['743 patent, col. 5, lines 14-
12 15, 29-38; col. 8, lines 18-21.] The Court thus adopts
13 Defendants' proposed construction of this claim term; for
14 the foregoing reasons, it also adopts the defense's
15 proposed definition of "expansion strut," i.e., "a strut
16 in an expansion column."

17
18 Plaintiff also objects that the patents neither
19 describe nor define the expansion columns as "tubular
20 structures" [Pl.'s Br. at 18.] In order to perform its
21 intended function, i.e., to prop open the artery wall
22 into which it has been inserted, the patented stent
23 necessarily forms a tubular shape when fully expanded.
24 The patent describes the role played by the expansion
25 columns when the stent is expanded thus: "each expansion
26

27 ⁶The parties agree that "expansion strut pair"
28 includes "joining struts" as well as "expansion struts."
Def'ts' Br. at 24 fn 13.

1 column 24 becomes circumferentially stretched.. " ['021
2 patent, col. 8, lines 34-38.] Each illustration of the
3 expanded stent in the patent, showing the expansion
4 columns, displays them in the form of a tubular
5 structure.

6
7 Accordingly, the Court adopts the proposed
8 construction of this term advanced by the defense.

9
10 **2. "Connecting Strut Column"**

11 The parties dispute two issues regarding construction
12 of this term: whether the connecting struts must be
13 attached to each other, and whether the columns must be
14 defined as formed solely of connecting struts. Hence,
15 Plaintiff proposes that this term be construed as
16 follows: "A plurality of the first connecting strut
17 forming a first connecting strut column," (Pl 's Br. at
18 23), whereas the defense offers the following
19 construction: "A column formed **solely** of a plurality of
20 connecting struts **unattached** to each other and arranged
21 along the circumference of the strut." (Def'ts' Br. at
22 26; emphasis added)

23
24 As to the first dispute, Plaintiff argues that
25 Defendants base their proposed construction on an
26 impermissible theory that the only embodiments disclosed
27 in the Jang patents show connecting struts that are

28

1 unattached to each other. [Pl.'s Br. at 23; Pl.'s Supp'l
2 Br. at 14.] For support, Plaintiff cites to Liebel-
3 Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 906 (Fed.
4 Cir. 2004); there, the court expressly disavowed any
5 "contention that if a patent describes only a single
6 embodiment, the claims of the patent must be construed as
7 being limited to that embodiment. . . . Even when the
8 specification describes only a single embodiment, the
9 claims of the patent will not be read restrictively
10 unless the patentee has demonstrated a clear intention to
11 limit the claim scope using 'words or expressions of
12 manifest exclusion or restriction.'" (Citations
13 omitted.) Relying on this passage, Plaintiff argues that
14 Defendants have failed to point to any language in the
15 patents where Dr. Jang summarizes his invention with
16 limiting language, requiring that the connecting struts
17 be unattached to one another. [Pl.'s Supp'l Br. at 14-
18 15.]]

19
20 Defendants' proposed definition does not run afoul of
21 the proscription against unduly restrictive claim
22 construction. First, as they point out, "every single
23 figure in the Jang patents that shows 'connecting
24 columns' . . . shows that the connecting struts forming
25 those columns are not connected to each other, but rather
26 (like prior art designs) connect the 'expansion columns'
27 . . . on either side of them." [Def'ts' Br. at 26.] In
28

1 other words, all of the figures in the specifications
2 depicting the connecting columns portray those columns
3 with connecting struts unattached to each other. All of
4 the embodiments disclosed in these patents contain
5 connecting columns with connecting struts which are
6 unattached to each other; Plaintiff has not cited to a
7 single instance in the specifications to support his
8 contrary position. The specifications' descriptions of
9 the connecting columns clearly state that the connecting
10 struts are unattached to one another. Second, the
11 Federal Circuit in the Phillips case had this to say
12 regarding a lack of explicit language in the patent
13 defining a claim term or disavowing a particular
14 construction: "[R]equiring that any definition of claim
15 language in the specification be express, is inconsistent
16 with our rulings that the specification is 'the single
17 best guide to the meaning of a disputed term.'" Phillips, 415 F.3d at 1321

19
20 The parties' second dispute revolves around whether
21 or not connecting strut columns are composed solely of
22 connecting strut pairs. Plaintiff correctly notes the
23 similarity between this issue and that resolved above,
24 i.e., whether the term "expansion column" should be
25 construed as composed only of expansion strut pairs.
26 Again, however, the specifications, illustrations, and
27 Summary of the Invention all uniformly and consistently
28

1 show and define the connecting strut columns as composed
2 only of connecting strut pairs. Thus, the authorities
3 cited above support Defendants' proposed construction.

4
5 Finally, Defendants argue strenuously that to accept
6 Plaintiff's proposed construction would "collapse the
7 structural distinction between connecting struts and
8 expansion struts, and between expansion columns and
9 connecting columns," and thus "broaden[] the claims to
10 cover prior art stents, even ones with very different
11 architectures." [Def'ts' Br. at 32.] This, Defendants
12 point out, would run the risk that the patent claims in
13 the Jang patents now assigned to them would be rendered
14 invalid as disclosed by or obvious under the prior art,
15 an inequitable result according to the Supreme Court in
16 Westinghouse v. Formica, 265 U.S. 342 (1924).

17
18
19 **3. "Connecting Strut"**

20 Plaintiff offers this construction of the term
21 "connecting strut": "a strut that couples an expansion
22 strut pair in one expansion column with an expansion
23 strut pair in another expansion column." Defendants ask
24 the Court to construe this term as follows: "A strut
25 that connects adjacent expansion columns."

26 // // //

27

28

1 All of the embodiments disclosed in the Jang patents
2 depict "connecting struts" connecting adjacent columns;
3 the language in the specifications and the Summary of the
4 Invention likewise consistently state that the
5 "connecting struts" connect adjacent expansion columns.
6 Plaintiff argues that all these reflect only "preferred
7 embodiments," upon which Defendants are relying in an
8 approach specifically disapproved by Phillips.

9
10 The Federal Circuit last year reiterated that the
11 "words of the claim are generally given their ordinary
12 and customary meaning," i.e., the meaning the term would
13 have to a person of ordinary skill in the art in question
14 at the time of the invention, "who views the claim term
15 in the light of the entire intrinsic record. Thus,
16 the claims 'must be read in view of the specification, of
17 which they are a part.'" Nystrom, 424 F.3d at 1142
18 (citing Phillips, 415 F.3d at 1316, and Markman, 52 F.3d
19 at 979). The entire intrinsic record here supports
20 Defendants' proposed construction: that "connecting
21 strut" means a strut that connects adjacent expansion
22 columns. Accordingly, the Court adopts that definition
23 of this term.

24
25 **4. Other Terms**

26 The parties dispute a few other terms, some of which
27 the Court finds need not be construed.

28

1 a. "proximal" and "distal"

2 The construction proposed by Plaintiff is that
3 consistent with the language in the patents, and
4 accordingly the Court adopts Plaintiff's construction of
5 these two terms, i.e.,

6
7 b. "radius of curvature"

8 In support of its proposed construction of this term,
9 Plaintiff cites the Court to a dictionary definition,
10 i.e., Webster's Third New International Dictionary: "the
11 reciprocal of the curvature of a curve," and proposes
12 that the term be construed as "a mathematical measurement
13 of the curvature of a curve; specifically, the reciprocal
14 of the curvature of a curve." Defendants propose that
15 the term be construed to mean "a smooth curve."

16
17 Plaintiff's proposed definition is more precise and
18 is consistent with the language and specifications in the
19 patent, and the Court hereby adopts it.

20
21 c. Terms for which no construction is needed

22 The remaining terms need no construction by the
23 Court: "comprising," "column," "longitudinal axis," and
24 "the first expansion strut of the first expansion
25 strut pair...has a longitudinal axis offset from a
26

27
28 ⁷As noted above, however, the relevant case law
defines this term in "patent law parlance."

1 longitudinal axis of the first expansion strut of the
2 second expansion strut pair. . ."

3

4

5

6

7 Dated: August 23, 2004

Virginia A. Phillips
VIRGINIA A. PHILLIPS
United States District Judge

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28